REMARKS

The specification has been amended in page 1 to clarify that the control channel is formatted and that the control channel is exclusively dedicated to a particular mobile unit. Amendments are presented to page 5 to clarify that "persistently" is "periodically repeatedly", and that "recurring" is the same as "repeating".

Support for the amendment to page 1 is set forth in page 4 beginning at line 11, through page 5, line 25, namely, "Fig. 3 graphically illustrates the use of a dedicated control channel and a prescribed format for transmitting ...". For "exclusively" also see page 4, lines 15-19. Similarly, support for the amendments to page 5 are also found in pages 4 and 5. Specifically, in page 5, lines 13-15, it states "in order to minimize the latency of transmitting requests, the dedicated resource of conveying requests should be available in a periodically recurring manner ...". It is believed that "recurring" means "repeating" or "repeatedly".

Claims 1, 11, 12, 18-21, 23, 26, 28, 32, 33, 36, 37-39, 44 and 45 have been currently amended. Claims 2, 5, 7-10, 13, 14, 22, 29, 34, 40 and 41 are as originally filed. Claims 3, 4, 6, 15-17, 24, 25, 27, 30, 31, 35, 42, and 43 have been canceled.

Claim Rejection Under 35 U.S.C. § 112

The Examiner had rejected claims 19, 20 and 25 under 35 U.S.C. § 112, second, paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is respectfully submitted that the amendments to the claims have obviated the Examiner's grounds for rejection under 35 U.S.C. § 112.

Specifically, claim 18, upon which claim 19 is dependent, currently has been amended to recite "an uplink traffic channel assignment", thereby providing the proper antecedent. Claim 19, as currently amended, now calls for said "uplink traffic channel assignment", which proper antecedent now is in claim 18, as currently amended.

Similarly, claim 20, as currently amended, is also dependent from claim 18 and now calls for said "uplink traffic channel assignment", which proper antecedent now is in claim 18, as currently amended.

Claim 25 has been canceled and, therefore, its rejection under 35 U.S.C. § 112 is moot.

Application No. 09/641,636

Claim Rejection Under 35 U.S.C. § 102

The Examiner had rejected original claims 1, 3, 5, 7-12, 14, 21, 23, 24, 26, 28, 29, 33-35, 37, 39-41 and 45 under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 6,031,832 issued to Turina on February 29, 2000, filed November 27, 1996.

It is respectfully submitted that the amendments to the claims have obviated the Examiner's grounds for rejection under 35 U.S.C. § 112.

Briefly, the Turina patent discloses a wireless communications system that uses one control channel for all mobile stations. Additionally, all packet traffic is assigned to one mobile station, a VIP MS, that is given priority for the available traffic channels. When the VIP MS is not transferring packets, the other MSs compete for the control channel and, hence, the uplink and downlink traffic channels.

Applicants' claim 1, as currently amended, now calls for their unique invention in a mobile unit to include:

> "a formatter for formatting a control channel including a prescribed control channel resource having one or more time slots, said control channel being dedicated exclusively to a particular mobile unit and having a prescribed portion of said control channel resource reserved to transport uplink traffic channel requests, wherein each mobile unit has a distinct control channel and contention is eliminated on said uplink;
>
> a transmitter for transmitting said uplink traffic channel requests in said prescribed portion of said control channel resource to a base station;
>
> a receiver to receive a response including an uplink channel assignment from said base station; and
>
> a controller associated with said transmitter to control said transmitting to periodically repeating transmission of said uplink traffic channel request in prescribed one or more of said one or more time slots prior to said particular mobile unit receiving a response from said base station,
>
> wherein said particular mobile unit and said base station a priori know the location of said prescribed portion of said control channel resource in said control channel,
>
> wherein there is no need to include control header information that indicates at least a structure of said control message with said uplink traffic channel requests and latency is minimized in transmitting said uplink traffic channel requests."

It is submitted that claim 1, as currently amended, clearly defines applicants' invention over the arrangement disclosed in the Turina patent or any other known reference, taken alone or in combination.

It appears that the arrangement disclosed in Turina can have one VIP MS that has the highest priority for transmitting uplink requests over a control channel. However, other MSs can use the control channel when the VIP MS is not. Moreover, in the Turina apparatus a time-out timer is employed that must time out before there is a retransmission of an uplink request on the uplink of the control channel.

In applicants' unique invention as defined in claim 1, as currently amended, the transmission of the requests is controlled to "periodically repeating" transmission of them prior to receiving a response from the base station. Indeed, applicants' invention eliminates the need to use time-out timers to trigger retransmission of the uplink requests and eliminates the inherent resulting latency in the transmission of the requests (See page 5, lines 19-25 of applicants' specification).

Additionally, claim 1, as currently amended, calls for the

> "control channel being dedicated exclusively to a particular mobile unit and having a prescribed portion of said control channel resource reserved to transport uplink traffic channel requests, wherein each mobile unit has a distinct control channel and contention is eliminated on said uplink".

By including the uplink channel requests in the exclusively dedicated control channel

> "there is no need to include control header information that indicates at least a structure of said control message with said uplink traffic channel requests".

It is noted that claim 1, as currently amended, recites that the control header information not required to be transmitted is of the type "that indicates at least a structure of said control message".

It is submitted that Turina fails to disclose any such limitations.

Therefore, it submitted that applicants' invention as now defined in claim 1, as currently amended, clearly distinguishes applicants' unique invention over the apparatus disclosed in the Turina patent or any other known reference, taken alone or in

combination. Consequently, claim 1, as currently amended, should be allowed over the rejection under 35 U.S.C. § 102(e) based on the Turina patent.

Moreover, in light of the significant differences between applicants' unique invention as defined in claim 1, as currently amended, and the Turina apparatus, it is respectfully submitted that applicants' invention as defined in claim 1, as currently amended, would not have been obvious to one possessing ordinary skill in the art at the time the invention was made upon a reading of the Turina patent or any other known reference taken alone or in combination. Therefore, it is believed that claim 1, as currently amended, is allowable under 35 U.S.C. § 103.

Claims 2, 5 and 7-11 are dependent from and further define claim 1, as currently amended. Consequently, claims 2, 5 and 7-11 include all the inventive elements and limitations of claim 1, as currently amended, which is believed to be allowable, so too, claims 2, 5 and 7-11 should be allowed over the rejection under 35 U.S.C. § 102(e) based on the Turina patent.

Further, since claim 1, as currently amended, is also believed to be allowable under 35 U.S.C. § 103, as indicated above, claims 2, 5 and 7-11 that are dependent from claim 1, as currently, amended would also be allowable under 35 U.S.C. § 103.

The Examiner had indicated that claim 12 was rejected essentially on the same grounds as original claim 1. The Examiner also noted that "the further limitations of eliminating the need to include control header information and that the control channel is dedicated exclusively to a particular mobile are not recited in the claim" (12).

Applicants' respectfully submit that the amendments to claim 12 have rendered the Examiner's grounds for rejection moot.

Specifically claim 12, as currently amended, now recites:

> "Apparatus for use in a wireless communications base station comprising:
>
> a receiver for monitoring at least one prescribed portion of a control channel resource of an incoming control channel to detect an incoming uplink traffic channel request from at least one mobile unit to which said at least one prescribed portion of said control channel resource is exclusively dedicated, said traffic channel request being periodically repeatedly transmitted by said at least one mobile unit;
>
> a detector for determining whether any uplink traffic channel requests have been received and, when an uplink traffic channel request has been detected, assigning a traffic channel to said at least one requesting mobile unit;

a transmitter responsive to a determination that at least one request has been received for transmitting a request response message including said traffic channel assignment to said at least one requesting mobile unit;

wherein said at least one mobile unit and said base station a priori know the location of said prescribed portion of said control channel resource in said control channel, wherein control header information that indicates at least a structure of said control message is not required to be transmitted with said uplink traffic channel requests; and

a utilization apparatus adapted to utilize said received traffic channel request to determine the true value of said received traffic channel request by subtracting an amount of traffic channel resource that has been assigned to said mobile unit that is not known to the mobile unit as being assigned at the time said mobile unit transmitted an uplink traffic channel request from an amount of said traffic channel resource requested in said transmitted uplink traffic channel request."

It is noted that claim 12, as currently amended, recites that the control header information not required to be transmitted is of the type "that indicates at least a structure of said control message". Additionally, claim 12, as currently amended, also recites:

"a receiver for monitoring at least one prescribed portion of a control channel resource of an incoming control channel to detect an incoming uplink traffic channel request from at least one mobile unit to which said at least one prescribed portion of said control channel resource is exclusively dedicated, said traffic channel request being periodically repeatedly transmitted by said at least one mobile unit" (emphasis added).

Further, claim 12, as currently amended, is directed to a base station that employs applicants' unique invention. Specifically, as indicated above, in applicants' unique invention as defined in claim 12, as currently amended, the transmission of the requests is controlled to "periodically repeating" transmission of them prior to receiving a response from the base station. Indeed, applicants' invention eliminates the need to use time-out timers to trigger retransmission of the uplink requests and eliminates the inherent resulting latency in the transmission of the requests

Moreover, claim 12, as currently amended, now recites:

"a utilization apparatus adapted to utilize said received traffic channel request to determine the true value of said received traffic channel request by subtracting an amount of traffic channel resource that has been assigned to said mobile unit that is not known to the mobile unit as being assigned at the time said mobile unit transmitted an uplink traffic channel request from an amount of said

traffic channel resource requested in said transmitted uplink traffic channel request."

It is submitted that Turina fails to disclose or even suggest any such element.

Consequently, it is believed that claim 12, as currently amended, is now allowable over the rejection under 35 U.S.C. § 102(e) based on the Turina patent.

Moreover, in light of the significant differences between applicants' unique invention as defined in claim 12, as currently amended, and the Turina apparatus, it is respectfully submitted that applicants' invention as defined in claim 12, as currently amended, would not have been obvious to one possessing ordinary skill in the art at the time the invention was made upon a reading of the Turina patent or any other known reference taken alone or in combination. Therefore, it is believed that claim 12, as currently amended, is allowable under 35 U.S.C. § 103.

Claims 13, 14 and 18-20 are dependent from and further define claim 12, as currently amended. Consequently, claims 13, 14 and 18-20 include all the inventive elements and limitations of claim 12, as currently amended, which is believed to be allowable, so too, claims 13, 14 and 18-20 should be allowed over the rejection under 35 U.S.C. § 102(e) based on the Turina patent.

Further, since claim 12, as currently amended, is also believed to be allowable under 35 U.S.C. § 103, as indicated above, claims 13, 14 and 18-20 that are dependent from claim 12, as currently, amended would also be allowable under 35 U.S.C. § 103.

Claim 21, as currently amended, is a system apparatus claim directed toward a system including a plurality of wireless terminals as defined in claim 1, as currently amended, and at least one base station as defined in claim 12, as currently amended.

Therefore, it is believed that claim 21, as currently amended, is allowable over the rejection under 35 U.S.C. § 102(e) based on the Turina patent, and would also be allowable under 35 U.S.C. § 103, for the reasons set forth above regarding claims 1 and 12, as currently amended.

Claim 22 is dependent from claim 21, as currently amended, which as indicated above is believed to be allowable. Since, claim 22 includes all the inventive elements of claim 21, as currently amended, which is believed to be allowable, so too, claim 22 should be allowed.

Claim 23, as currently amended, is a means plus function claim directed toward a wireless terminal and is of similar scope as claim 1, as currently amended, and should be allowed for the same reason as set forth above regarding claim 1, as currently amended.

Claim 26 is dependent from claim 23, as currently amended, which as indicated above is believed to be allowable. Since, claim 26 includes all the inventive elements of claim 23, as currently amended, which is believed to be allowable, so too, claim 26 should be allowed.

Claim 28, as currently amended, is a means plus function claim directed toward a base station and is of similar scope as claim 12, as currently amended, and should be allowed for the same reason as set forth above regarding claim 12, as currently amended.

Claims 29 and 32 are dependent from claim 28, as currently amended, which as indicated above is believed to be allowable. Since, claims 29 and 32 include all the inventive elements of claim 28, as currently amended, which is believed to be allowable, so too, claims 29 and 32 should be allowed.

Claim 33, as currently amended, is a method claim directed toward a wireless terminal and is of similar scope as claim 1, as currently amended, and should be allowed for the same reason as set forth above regarding claim 1, as currently amended.

Claims 34, 36, 37 and 38 are dependent from claim 33, as currently amended, which as indicated above is believed to be allowable. Since, claims 34, 36, 37 and 38 include all the inventive elements of claim 33, as currently amended, which is believed to be allowable, so too, claims 34, 36, 37 and 38 should be allowed.

Claim 39, as currently amended, is a method claim directed toward a base station and is of similar scope as claim 12, as currently amended, and should be allowed for the same reason as set forth above regarding claim 12, as currently amended.

Claims 40 and 41 are dependent from claim 39, as currently amended, which as indicated above is believed to be allowable. Since, claims 40 and 41 include all the inventive elements of claim 39, as currently amended, which is believed to be allowable, so too, claims 40 and 41 should be allowed.

Claim 45, as currently amended, is a system method claim directed toward a system of similar scope as claim 21, as currently amended, and should be allowed for the same reasons as set forth above regarding claim 21, as currently amended.

Claim 46 is dependent from claim 45, as currently amended,. Since, claim 46 includes all the inventive steps of claim 45, as currently amended, which is believed to be allowable, so too, claim 46 should be allowed.

The Examiner has also rejected original claims 1, 3-7, 11, 12, 14-18, 20, 21, 23-33, 35, 39 and 41-45 under 35 U.S.C. § 102(e) as being anticipated by United States Patent 6,424,645 issued to T. Kawabata et al. (Kawabata) on July 23, 2002, filed on April 29, 1999.

It is noted that claims 3, 4, 6, 15-17, 24, 25, 27, 30, 31, 35, 42 and 43 have been canceled.

It is respectfully submitted that the amendments to the claims have obviated the Examiner's grounds for rejection under 35 U.S.C. § 102(e) based on the Kawabata patent.

Kawabata discloses a TDMA radio communication method including the steps of: providing a latter part of each of super frames with an assignment information notification period which is preceded by an assignment processing period, and providing a remaining part of the each of the super frame with an assignment request collecting period; transmitting, from a terminal station to a base station, assignment request information using a plurality of frames included in the assignment request collecting period; transmitting, from the base station to the terminal station, frame structure information and assignment information over a plurality of frames included in the assignment information notification period; and carrying out, in the base station, channel assignment of a radio channel, changes of the frame structure and of the channel assignment in response to timings of the super frames (see Kawabata abstract).

This channel assignment processing is further described in Kawabata at Column 6, lines 19-67 as follows:

> "FIG. 1 is a sequence diagram illustrating a channel assignment processing of the embodiment 1 in accordance with the present invention. Horizontal axes are a time axis, and the processing is carried out sequentially from the left-hand side. Blocks at the top of this figure represent TDMA frames and a super frame consisting of six frames from frame 1 to frame 6. In the present invention, an assignment information notification period is provided at a latter part of the super frame, and it is preceded by an assignment processing period. The remaining portion of the super frame is assigned as an assignment request information collecting period. In FIG. 1, three frames from frame 1 to frame 3 are

> assigned to the request information collecting period, the frame 4 is assigned to the channel assignment processing period, and the remaining frames 5 and 6 are assigned to the assignment information notification period (emphasis added).
>
> When data to be transmitted takes place in any of the terminal stations 2, they each transmit to the base station 3 information for requesting assignment of a traffic channel with the number of slots needed for the communications. This transmission is carried out throughout the request information collecting period from frame 1 to frame 3, during which the same information is transmitted repeatedly (emphasis added).
>
> Transmitting the same information many times can improve the transmission reliability in conjunction with the majority decision on the receiving side. This is because the receiving side can receive the information in a kind of time diversity scheme with expecting the statistical independence of transmission characteristics at respective transmission timings. As a result, the base station 3 can collect the assignment request information from the entire terminal stations 2 to which the base station 3 has already assigned the control channel (emphasis added)."

From the above, it is seen that all the terminal stations 2 have access to the control channel. Thus, it is submitted that Kawabata does not meet applicants' call in claim 1, as currently amended, for:

> "a formatter for formatting a control channel including a prescribed control channel resource having one or more time slots, said control channel being dedicated exclusively to a particular mobile unit and having a prescribed portion of said control channel resource reserved to transport uplink traffic channel requests, wherein each mobile unit has a distinct control channel and contention is eliminated on said uplink"(emphasis added).

It is further submitted that in Kawabata overhead identifying the individual terminal stations 2 must be transmitted in order to identify which terminal station 2 is using the control channel. Moreover , since all the terminal stations 2 are trying to use the same control channel there must be contention for that control, which results in possible collisions.

Consequently, it is further submitted that Kawabata fails to anticipate applicants' call in claim 1, as currently amended, for:

> "there is no need to include control header information that indicates at least a structure of said control message with said uplink traffic channel requests"; and

"wherein said particular mobile unit and said base station a priori know the location of said prescribed portion of said control channel resource in said control channel".

Indeed, in Kawabata in Column 6, line 58-Column 7, line,7 the transmission of the frame structure, which is overhead is clearly stated, namely:

"considering the assignment request information from the entire terminal stations 2 to the base station 3 and the traffic from the base station 3 to the entire terminal stations 2, the base station 3 determines, in accordance with the traffic, the frame structure which depends on the boundary between the upward channel and downward channel and the like. Next, the base station 3 distributes to the terminal stations 2 the slots of the user channel in response to the assignment request information, in which case optimum channel assignment is achieved considering the position information about the terminal stations 2, interference amounts, and priorities of services.

Then, the base station 3 transmits to the terminal stations 2, during the assignment information notification period from frame 5 to frame 6, the frame structure and channel assignment information decided in the assignment processing period."

In light of the above, it is respectfully submitted that Kawabata fails to anticipate applicants' unique invention as now defined in claim 1, as currently amended. Therefore, it is believed that claim 1, as currently amended, is allowable over the rejection under 35 U.S.C. § 102(e) based on the Kawabata patent.

Moreover, in light of the significant differences between applicants' unique invention as defined in claim 1, as currently amended, and the Kawabata apparatus, it is respectfully submitted that applicants' invention as defined in claim 1, as currently amended, would not have been obvious to one possessing ordinary skill in the art at the time the invention was made upon a reading of the Kawabata patent or any other known reference taken alone or in combination. Therefore, it is believed that claim 1, as currently amended, is allowable under 35 U.S.C. § 103.

Claims 2, 5 and 7-11 are dependent from and further define claim 1, as currently amended. Consequently, claims 2, 5 and 7-11 include all the inventive elements and limitations of claim 1, as currently amended, which is believed to be allowable, so too, claims 2, 5 and 7-11 should be allowed over the rejection under 35 U.S.C. § 102(e) based on the Kawabata patent.

Further, since claim 1, as currently amended, is also believed to be allowable under 35 U.S.C. § 103, as indicated above, claims 2, 5 and 7-11 that are dependent from claim 1, as currently, amended would also be allowable under 35 U.S.C. § 103.

Claim 12, as currently amended, is directed to a base station that employs applicants' unique invention. It is noted that claim 12, as currently amended, recites that the control header information not required to be transmitted is of the type "that indicates at least a structure of said control message".

Additionally, claim 12, as currently amended, also recites:

> "a receiver for monitoring at least one prescribed portion of a control channel resource of an incoming control channel to detect an incoming uplink traffic channel request from at least one mobile unit to which said at least one prescribed portion of said control channel resource is exclusively dedicated, said traffic channel request being periodically repeatedly transmitted by said at least one mobile unit" (emphasis added).

Surely, Kawabata fails to disclose or suggest any such exclusively dedicated control channel resource. See the discussion above regarding Kawabata and the same issue in claim 1, as currently amended.

Moreover, claim 12, as currently amended, now recites:

> "a utilization apparatus adapted to utilize said received traffic channel request to determine the true value of said received traffic channel request by subtracting an amount of traffic channel resource that has been assigned to said mobile unit that is not known to the mobile unit as being assigned at the time said mobile unit transmitted an uplink traffic channel request from an amount of said traffic channel resource requested in said transmitted uplink traffic channel request."

It is submitted that Kawabata fails to disclose or even suggest any such element.

Consequently, it is believed that claim 12, as currently amended, is now allowable over the rejection under 35 U.S.C. § 102(e) based on the Kawabata patent.

Moreover, in light of the significant differences between applicants' unique invention as defined in claim 12, as currently amended, and the Kawabata apparatus and process, it is respectfully submitted that applicants' invention as defined in claim 12, as currently amended, would not have been obvious to one possessing ordinary skill in the art at the time the invention was made upon a reading of the Kawabata patent or any

other known reference taken alone or in combination. Therefore, it is believed that claim 12, as currently amended, is allowable under 35 U.S.C. § 103.

Claims 13, 14 and 18-20 are dependent from and further define claim 12, as currently amended. Consequently, claims 13, 14 and 18-20 include all the inventive elements and limitations of claim 12, as currently amended, which is believed to be allowable, so too, claims 13, 14 and 18-20 should be allowed over the rejection under 35 U.S.C. § 102(e) based on the Kawabata patent.

Further, since claim 12, as currently amended, is also believed to be allowable under 35 U.S.C. § 103, as indicated above, claims 13, 14 and 18-20 that are dependent from claim 12, as currently, amended would also be allowable under 35 U.S.C. § 103.

Claim 21, as currently amended, is a system apparatus claim directed toward a system including a plurality of wireless terminals as defined in claim 1, as currently amended, and at least one base station as defined in claim 12, as currently amended.

Therefore, it is believed that claim 21, as currently amended, is allowable over the rejection under 35 U.S.C. § 102(e) based on the Kawabata patent, and would also be allowable under 35 U.S.C. § 103, for the reasons set forth above regarding claims 1 and 12, as currently amended.

Claim 22 is dependent from claim 21, as currently amended, which as indicated above is believed to be allowable. Since, claim 22 includes all the inventive elements of claim 21, as currently amended, which is believed to be allowable, so too, claim 22 should be allowed.

Claim 23, as currently amended, is a means plus function claim directed toward a wireless terminal and is of similar scope as claim 1, as currently amended, and should be allowed for the same reason as set forth above regarding claim 1, as currently amended.

Claim 26 is dependent from claim 23, as currently amended, which as indicated above is believed to be allowable. Since, claim 26 includes all the inventive elements of claim 23, as currently amended, which is believed to be allowable, so too, claim 26 should be allowed.

Claim 28, as currently amended, is a means plus function claim directed toward a base station and is of similar scope as claim 12, as currently amended, and should be allowed for the same reason as set forth above regarding claim 12, as currently amended.

Claims 29 and 32 are dependent from claim 28, as currently amended, which as indicated above is believed to be allowable. Since, claims 29 and 32 include all the inventive elements of claim 28, as currently amended, which is believed to be allowable, so too, claims 29 and 32 should be allowed.

Claim 33, as currently amended, is a method claim directed toward a wireless terminal and is of similar scope as claim 1, as currently amended, and should be allowed for the same reason as set forth above regarding claim 1, as currently amended.

Claims 34, 36, 37 and 38 are dependent from claim 33, as currently amended, which as indicated above is believed to be allowable. Since, claims 34, 36, 37 and 38 include all the inventive elements of claim 33, as currently amended, which is believed to be allowable, so too, claims 34, 36, 37 and 38 should be allowed.

Claim 39, as currently amended, is a method claim directed toward a base station and is of similar scope as claim 12, as currently amended, and should be allowed for the same reason as set forth above regarding claim 12, as currently amended.

Claims 40 and 41 are dependent from claim 39, as currently amended, which as indicated above is believed to be allowable. Since, claims 40 and 41 include all the inventive elements of claim 39, as currently amended, which is believed to be allowable, so too, claims 40 and 41 should be allowed.

Claim 45, as currently amended, is a system method claim directed toward a system of similar scope as claim 21, as currently amended, and should be allowed for the same reasons as set forth above regarding claim 21, as currently amended.

Claim 46 is dependent from claim 45, as currently amended,. Since, claim 46 includes all the inventive steps of claim 45, as currently amended, which is believed to be allowable, so too, claim 46 should be allowed.

Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 2, 13, 22, 34, 40 and 46 under 35 U.S.C. § 103(a) as being unpatentable over the Turina patent, noted above, in view of an article entitled "An Overview of Air Interface Multiple Access for IMT-2000/UMTS", authored by T. Ojanpera et al. and dated September 1998 and also over the Kawabata patent in view of the Ojanpera et al. article.

As indicated above, independent claims 1, 12, 21, 33, 39 and 46 from which claims 2, 13, 22, 34, 40 and 46, respectively, are dependent, are all believed to be allowable over the rejections based on both the Turina and Kawabata patents. Again, as indicated above, claims 2, 13, 22, 34, 40 and 46 therefore include all the limitations of claims 1, 12, 21, 33, 39 and 46, respectively, which are believed to be allowable, so too, claims 2, 13, 22, 34, 40 and 46 should be allowed under 35 U.S.C. § 103(a) over the rejections based on the Turina and Kawabata patents and the Ojanpera et al. article.

The Examiner has also rejected claims 4, 6, 15-20, 25, 27, 30-32, 36, 38 and 42-44 under 35 U.S.C. § 103(a) as being unpatentable over the Turina patent, noted above, in view of United States Patent No. 6,430,417 issued to K. Raith et al. on August 6, 2002, filed March 30, 1995.

It is noted that claims 4, 6,15-17, 25, 27, 42 and 43 have been canceled.

Again, as indicated above, independent claims 1, 12, 21, 33, and 39 from which claims 18-20, 30-32, 36, 38, 43 and 44 are dependent, are all believed to be allowable over the rejections based on the Turina patent. Therefore, since claims 18-20, 30-32, 36, 38, 43 and 44 include all the limitations of their respective parent of claims 1, 12, 21, 33, and 39, which are believed to be allowable, so too, claims 18-20, 30-32, 36, 38, 43 and 44 should be allowed under 35 U.S.C. § 103(a) over the rejections based on the Turina and Raith et al. patents.

The Examiner has rejected claims 8, 10 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Kawabata patent, noted above, in view of United States Patent No. 6,295,453 issued to M. Desgagne et al. on September 25, 2001, filed October 7, 1998.

As indicated above, independent claims 1 and 12 from which claims 8 and 10, and 19, respectively, are dependent are believed to be allowable over the Kawabata patent. Therefore, since claims 8 and 10 include all the inventive elements of claim 1, as currently amended, and claim 19 includes all the inventive elements of claim 12, as currently amended, they too, should be allowed under 35 U.S.C. § 103(a) over the rejection based on the Kawabata and Desgagne et al. patents.

Claims 1, 2, 5, 7-11, 12-14, 18-23, 26, 28, 29, 32-35, 37-41, 45 and 46 remain in this application.

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It is believed that this application is now in condition for allowance. Reconsideration and allowance are therefore respectfully solicited.

If there are still outstanding issued to be resolved, the Examiner is respectfully invited to call applicants' attorney, Thomas Stafford, at 727-772-4173 so that those issues may be discussed and satisfactorily resolved.

Respectfully,
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